Bike Power Training by Coach Daren

A rider's ability to deliver power to the ground is critical. If two riders weigh the same then the one with the higher pedaling power will climb the hill faster, win the time trial, or come off the bike and onto the run course at the triathlon sooner, and likely less tired than the triathlete with less power delivery. To meet an athlete's cycling and triathlon racing season goals later this year the athlete should be spending at least one day per week right now focused on power development, or the ability to generate more wattage.

Simply riding harder on all your rides is not the correct way to improve power. What's the saying, "Keep the easy days easy, and the hard days hard." Having one or two one-hour sessions per week with bike power development in mind is all it should take for most athletes. You need to work hard for a short time…and then go recover since we get stronger when we grow after the workout. Personally, I do most of my power workouts on a trainer, and rarely do they last more than one hour. Thus with limited daylight in the Winter and hectic family and work schedules it is pretty easy to do a one hour ride while watching a good Ironman DVD before my family even wakes up in the morning.

Pushing the pedals harder than you normally do for some prescribed time duration at some very specific effort level is all it takes. Your legs, lungs, and heart grow in response to the added workload, and over time, you can produce more power. Or alternatively, you can produce the same power you have been making – but at an effort level that does not tax you so much that you cannot 'run off of the bike'. Sounds easy! The secret to all of this is to use a specific effort level. Just hammering on the pedals does not get the job done!

Many readers may not be aware that several local coaches currently offer Power Testing on bikes – these power tests can tell the rider exactly what power level to use when power training (the heart rates and/or wattage rates from a power test can also be used to set training zones for any bike workout for that matter). A power test is a simple test where the rider pedals their bike through a prescribed workout session on a trainer owned by the coach while the coach downloads data from the computer on the trainer. Typical measuring trainers might include a Computrainer or a Tacx Flow. During the test the trainer is measuring typical functions like heart rate, cadence, speed, and unlike typical bike computers – watts or power delivered to the ground by the rear wheel.

Power testing is usually far less costly than having full-blown laboratory tests like VO2max and blood lactate testing done. OK, so some of the training zones from the lab test and a coach's power test might be off by a heart beat or two…but let's be realistic and admit that hydration, rest, and OTC medications may well affect heart rate more than the difference between a power test and a lab test.

One important thing to keep in mind: as you progress through a series of workouts and develop more power you will likely see a corresponding rise in your lactic threshold heart rate. A typical workout based on wattage or on heart rate might be written as: "go ride four 5 minute intervals at 95% of your lactic threshold heart rate", or "…at 92% of the wattage you generated at your lactic threshold wattage." Well, as you improve, the base from which you are working the changes, and the old workouts will not stimulate new growth.

What all this means is that you should have tests at regular intervals throughout the year to reestablish new training heart rates and training wattage points. At a minimum I recommend to my athletes that we test at the end of their initial winter base training, and again in late spring. If you were to continue working with numbers from several months ago you will likely not improve, but will rather 'plateau' in your power training. Quite often the money saved by simple power testing compared to full blown lab testing (about $100 for a power test versus maybe $300 for a lab test) will allow your annual testing budget to bear several useful power tests in one season.

So, have a talk with a coach, and ask them about power testing you on the bike. Maybe more important – ask the coach how to apply the numbers that come out of the test. Test data is cool stuff, but be sure you also have 1) heart rate and/or wattage training zones based on the test data, and 2) a series of workouts based on the test data. After all, isn't the whole idea here to grow stronger on the bike to climb, sprint, and run-off-the-bike faster than you did last year!